

DUGAN AND HELTERBRAND CO., INC.

File Summary  
August 22, 1990

Dugan and Helterbrand Co., Inc. (D&H) recovered silver from photographic films using a cyanide process at its facility at 190 George Street in Marshfield, Missouri. The start-up date is not known.

January 1983 D&H started to neutralize film chips contaminated with cyanide before sending them to the Webster County Sanitary Landfill. Prior to this date, unneutralized film chips were sent to the landfill.

Summary 1983 D&H attempted to discharge cyanide solutions to the city sewer. The sewer line was blocked and some of the solution surfaced and killed six head of cattle.

January 24, 1984 The Missouri Department of Natural Resources (MDNR) certified D&H as a hazardous waste resource recovery facility.

March 12, 1984 The MDNR approved a special waste disposal request for waste film chips from the silver recovery process based upon the presence of a cyanide reduction treatment process used for all film chips, and based upon laboratory analysis showing that residual cyanide levels were between 61 ppm and 100 ppm. These chips were approved to go to the Webster County Sanitary Landfill.

July 31, 1984 The MDNR notified D&H that, because of a regulatory change, the recovery of silver meeting the requirements set forth in 10 CSR 25-4.010(1)(E)(6) would no longer be regulated effective August 13, 1984. Based upon this, the hazardous waste resource recovery certification was no longer required and was withdrawn by MDNR.

April 25, 1985 Two representatives of MDNR's Southwest Regional Office (SWRO) and one representative of the Laboratory Services Program (LSP) of the MDNR conducted a hazardous waste compliance inspection at D&H. During the inspection, three samples of film chips were collected by LSP personnel including two samples of film chips following the cyanide reduction treatment and one sample prior to the cyanide reduction process. The results of laboratory analysis conducted on the film chips showed 1,010 ppm and 1,370 ppm of cyanide on the film chips after the cyanide reduction process and 2,338 ppm of cyanide on the film chips prior to the cyanide reduction process. Consequently, the film chips were reactive hazardous waste meeting the definition in 10 CSR 25-4.010(4)(A). The film chips from the silver recovery process were disposed of as a nonhazardous waste in the Webster County Sanitary Landfill.



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April 30, 1985      Order to Abate Violations #HW-85-005 was issued to D&H for the improper disposal of film chips contaminated with cyanide. The company was ordered to stop sending film chips to the landfill.

May 7, 1985        An agreement was reached between D&H and the MDNR which allowed the film chips to be disposed of at a sanitary landfill if each batch were tested beforehand and less than 250 ppm of cyanide was present on the chips.

September 7, 1985      SWRO conducted a hazardous waste compliance inspection. No violations were noted and a regulated quantity of hazardous waste was not being generated. D&H was using a newly installed enzyme extraction process to recover the silver from the film. The cyanide process was used only 10% of the time.

